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- A Summary of the Sakatah Lake stat

A Management Plan for Sakatah Lake State Park

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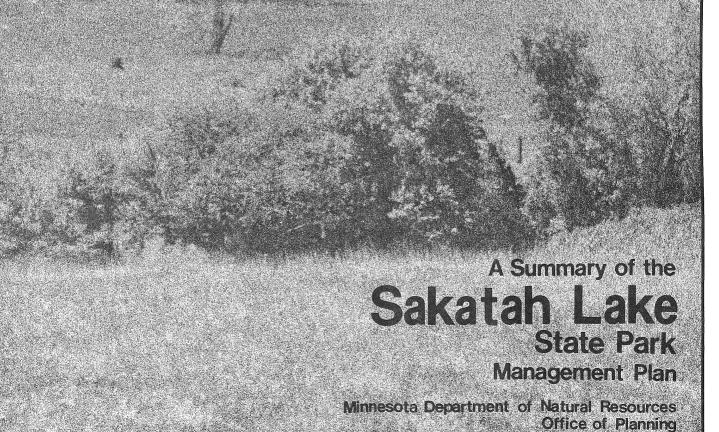
innesota Department of Natural Resources

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This document is a summary of the Sakatah Lake State Park management plan. All recommendations, both resource management and physical development are included here. The detailed inventory data and specific instructions for implementation of resource management and facility development have been compiled into a comprehensive management plan with technical appendices. These documents are on file in the:

Office of Planning
Department of Natural Resources
Box 10E Centennial Office Building
St. Paul, Minnesota 55155



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Introduction

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AN OVERVIEW OF SAKATAH LAKE STATE PARK

Sakatah Lake State Park was established in 1963. It is located in extreme southeastern LeSueur County, adjacent to the town of Waterville. Twin Cities metropolitan area is approximately 65 miles north. The park is accessible from the east and west on Trunk Highway 60 (TH 60). The statutory boundary of the park encloses 842 acres and includes 3.5 miles of shoreline on Sakatah Lake. The topography of the park is rolling with several small drainage ways running from higher park lands into the lake. A bedrock of Jordan sandstone is covered by a 400 ft layer of glacial till.

The lake provides a variety of recreational opportunities for park visitors. Park facilities include a semi-modern campground with 60 sites, a primitive group camp, a picnic ground, a boat launch, and a total of 5 miles of trails. During the winter, two miles of ski touring trails and a snowmobile access to the Sakatah Singing Hills State Trail are provided. The interpretive center is operated from June until September.

THE PLANNING PROCESS

In 1975 the Minnesota State Legislature passed the Outdoor Recreation Act (ORA). The intent of this legislation is to ensure, through long-range planning, the protection and perpetuation of Minnesota's outstanding resources. Also included in this legislation is the mandate to provide recreational facilities which are desired by the citizens of Minnesota but which do not compete with the private sector. The Park Planning Section of the DNR, Office of Planning was established to formulate long range resource management and recreation development plans for 82 state parks, recreation areas, and waysides. Funds for these plans are appropriated biennially by the Legislative Commission of Minnesota Resources (LCMR).

The park planning process consists of six steps:

- 1. An inventory of natural resources, visitor use, and existing facilities is compiled. Specialists from other DNR divisions and sections assist in collecting pertinent data. At this point the first public workshop is held.
- 2. Alternatives for park management and development are developed. A second public workshop may be held to review these alternatives and invite further public comment. These alternatives are then reviewed by the Park Planning staff and the DNR, Division of Parks and Recreation.
- 3. The recommendation for park classification is made, the park goal is developed, and the draft plan is written. This step culminates in the first interdepartmental review.
- 4. The draft plan may be revised as the result of the interdepartmental review. The revised plan is made available to the public for a 30 day review period, after which the final public meeting is held.
- 5. The draft plan may be revised according to information received from the public review. The plan is then sent to the Department of Energy, Planning, and Development for a 60 day reviewal period. (This management plan was approved in September 1982.)
- 6. The plan is implemented by the DNR, Division of Parks and Recreation.

A SUMMARY OF MANAGEMENT AND DEVELOPMENT PROPOSALS

Resource Management

Establish and maintain tall grass prairie in key areas of park. Maintain open grassland north of Sakatah Singing Hills Trail. Remove understory trees, thin canopy, and establish grass in

lakeside picnic ground and establish grass in the campground. Increase the water level in marsh southwest of Schwartz Hill

when life estate becomes available.

Plant old field grasslands and life estate lands with oak.

Maintain mature maple basswood canopy.

Diversify ash planting north of service court.

Control weed infested areas.

Develop fire management plan and conduct prescribed burns.

Identify tree diseases monitor progression.

Maintain maximum number of dead standing and down trees.

Inventory and map DNR, Natural Heritage Elements.

Maintain large, undisturbed forest areas.

Inventory shorebird nesting habitat on island in Sakatah Lake.

Manage deer herd.

Test well water quality and improve water supply.

Conduct an archaeological survey of park.

Consult Intertribal Indian Affairs Board and state archaeologist prior to management or construction near archaeological sites.

Research location of Alexander Faribault trading post site. Provide park interpretive staff with information on prehistoric or historic sites. Recreation Management

Upgrade poorly designed campsites and pave roads with asphalt. Relocate primitive group camp.

Develop horseback rider campground.

Monitor use of camping facilities by state trail users and provide separate camping area, if justified.

Improve existing picnic area and develop second area.

Pave picnic ground parking lots with asphalt.

Improve park entrance road.

Pave major park roads and parking lots with asphalt.

Develop access road through park to proposed primitive group camp and horseback rider campground.

Upgrade boat launch parking lot.

Request Morristown Township in Rice County to impose 30 mph speed limit on township road which connects TH 60 and Cty Rd 99 on east side of park.

Expand hiking/ski touring trail system.

Give consideration to an alternative horseback trail in southern portion of park, rather than on state trail. Provide snowmobile access from park entrance to state trail. Reroute hiking-only portion of Lakeside Trail to avoid badly eroded areas.

Construct multi-purpose visitor center/winter trail shelter near campground parking lot.

Prune vegetation along state trail to allow views of lake. Provide bike lockup facility in picnic area near parking lots. If state trail is completed for horses, provide tieup near day use facilities.

Consider a bicycle concession and hostel in park. Maintain swimming beach as is.

Upgrade boat launch ramp.

Interpretive Services

Include state trail and canoe route information on park handout. Develop two interpretive brochures highlighting natural and historical features.

Install interpretive signage at prehistoric and historic sites. Recommend development of interpretive brochure for Sakatah Singing Hills State Trail and Cannon River Canoe and Boating Route.

Provide park information and interpretation in picnic area.

Administrative/Support Facilities

Construct new contact station/park office.

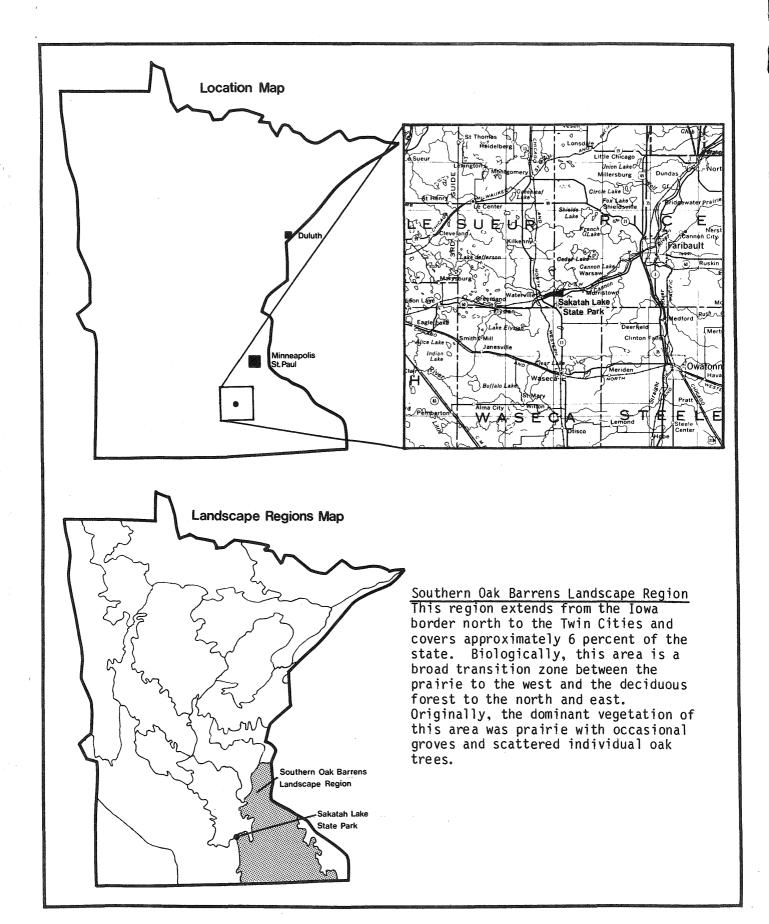
Construct unheated storage building in service court.

Construct two-car garage for manager's residence.

Temporarily maintain the seasonal residence adjacent to visitor center.

Construct separate, fireproof building for storage of flammable substances.

Bury gasoline tanks and overhead power lines.



Classification

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There is a delicate balance which must be maintained when recreational facilities are provided for large numbers of people in areas of outstanding and often sensitive resources. propriate development can result in irreparable damage to the resource. To help ensure this recreation/resource balance, the Minnesota State Legislature established, through the Outdoor Recreation Act of 1975 (ORA), a classification process whereby each unit in the state recreation system can be identified as one (or more) component in the system. These components are: natural state park; recreational state park; state trail; state scientific and natural area; state wilderness area; state forest and state forest sub-area; state wildlife management area; state water access site; state wild, scenic, and recreational rivers; state historic site; and state rest area. Included in this legislation are general criteria for classifying, planning, and managing each of these components.

Criteria for a Recreational State Park Designation

DNR policy identifies four criteria based on ORA which a park must substantially meet to qualify for classification as a recreational state park. Sakatah Lake State Park meets these criteria.

"Possess natural resources, or artificial resources in a natural setting, with outstanding outdoor recreation potential.

"Provide outstanding outdoor recreational opportunities that will attract visitors from beyond the local area.

"Contain resources which permit intensive recreational use by large numbers of people and be of a size sufficient to provide for effective management and protection of the natural and/or artificial outdoor recreational resources, so that they will be available for both present and future generations.

"Be located in areas where they appropriately accommodate the outdoor recreational needs of the state populations, provided that they complement but are not in place of recreational service normally offered by local or regional units of government or the private sector."

Recommended Classification

Because Sakatah Lake State Park substantially fulfills all of the above criteria, it is recommended that the park be classified as a recreational state park.

GOAL FOR THE PARK

The goal for Sakatah Lake follows the overall goal for recreational state parks as stated in the DNR policy.

"It is the goal of the Department of Natural Resources in recreational state parks to:

"Provide lands and waters which offer a broad selection of outdoor recreational activities in a natural setting and which may be used by large numbers of people."

Park Resources

CLIMATE

Information on annual temperature and precipitation for the park comes from a weather station in Faribault. The low, rolling hills surrounding the Cannon River valley have no sharply marked differences in topography, therefore the climate in the region around the park is quite uniform.

The average temperature for December, January, and February is $17^{0}F$. Almost all winters have an average of 5 days when the temperature is $-20^{0}F$ or lower. The average temperature for June, July, and August is $70^{0}F$. The growing season is 140 days.

About 75 percent of the annual precipitation (23 inches) falls from April through September. Rainfall intensities of about 1.5 inches an hour can be expected once every two years. Annual snowfall averages 38.5 inches and the average number days with snowcover is 95.

GEOLOGY

The landforms of LeSueur and Rice counties are the result of glacial activity. Sakatah State Park is situated on the Altamont moraine which was formed about 13,000 years ago by the Des Moines lobe of the Wisconsin glaciation. A moraine is a large mound of unconsolidated unstratified rock and mineral debris deposited at the edge of glacial ice. This area has rolling, steep hills, crooked streams, and many lakes.

The main area of the park has from 200 to 400 ft of glacial deposits and the east end of the park 100-200 ft. The bedrock formations underlying the glacial deposits (Shakopee-Oneota dolomite of varying thickness in the park area) dip regionally to the southeast.

Along the Cannon River valley, glacial ice blocks left by receding glaciers formed depressions which filled with water creating lakes such as Sakatah and Tetonka.

SOILS

There is are a variety of soil types in Sakatah Lake State Park all of which are the result of glacial activity depositing till overlying bedrock.

The western two-thirds of the park is dominated by Lester soils interspersed with deposits of nearly level Webster and Glencoe soils. Both soil types have moderate limitations for recreational developments such as campgrounds and picnic areas. The campground and service area are located on Lester soils which have slight development limitations. More steeply sloped Lester soils, such as the area between the lakeshore and the Sakatah Singing Hills State Trail, have moderate to severe limitations for most recreational development. However trails can be developed within the requirements of these soil limitations.

Soil deposits in the eastern third of the park are more varied and mixed. Complete information on all park soils is included in the comprehensive management plan and the management plan details.

VEGETATION

It is theorized that following the retreat of Wisconsin glaciation, forests in Wisconsin and Minnesota were composed largely of oak and other hardwoods.

As the climate became warmer and dryer, the development of prairie species was favored and prairie encroached on forested areas. As the climate began changing toward the more mesic (moderately moist) condition of today, the deciduous forest reestablished itself in areas which had been invaded by prairies.

A description of the vegetation prior to settlement is available in General Land Survey Office records. These records constitute the field notes of the original surveyors of Minnesota during the mid to late 1800's.

The area which is now the park was described in the survey records as low, rolling land with second rate timber and prairie with bur oak, basswood, aspen, butternut, elm, ash, and ironwood.

In some areas of the park, large bur oaks, with large horizontal branches and erect limbs can be found. These trees probably developed under savanna conditions and have since had younger trees grow in around them closing the forest canopy. Prairie species can be found in several parts of the park. The quality of these areas and number of species found is poor. Schwartz Hill is the only good remnant of prairie existing in the park.

Vegetation communities inventoried for this plan in 1980 are delineated on the Vegetation Map, p 35.

WILDLIFE

The combination of open fields, upland forests, lowland hardwoods, varied wetlands, open water, forest edge, and shrubby land in the park provides habitat for a variety of wildlife species.

Deer winter in the park and in a large wetland area immediately south of the park. They tend to move back and forth between these two areas. They cross TH 60 near the park creating a hazard for motorists. Several deer are hit and killed in the area of the park each year. The area has been signed to warn motorists of the deer crossing. If roadkills increase significantly, management alternatives must be considered. The present situation is being evaluated by DNR Parks and Wildlife personnel. Other than the roadkills there are currently no major wildlife problems in the park.

A variety of small game species inhabit the park, including beaver, muskrat, raccoon, mink, cottontail rabbit, and red fox.

SURFACE WATER

Sakatah Lake is a part of the Cannon River system. Sakatah and Lower Sakatah lakes total about 1,350 acres in size and have 13 miles of shoreline. Their maximum depth is about 10 ft. There are 62 seasonal and permanent homes and 7 resorts on their shores. The resorts have a total of 68 cabins and 352 campsites. More than one-third of the shoreline is in state ownership within the park boundary.

There are two designated public boat accesses on Sakatah Lake. A concrete plank boat ramp is located on the channel between lakes Tetonka and Sakatah in the city of Waterville. The second, a steel grate ramp, is located in the park. Small boats can also be launched at the bridge on County Road 99 at the west end of Lower Sakatah Lake.

During the summer months lakes Tetonka and Sakatah have several periods of high algae bloom which is indicative of high nutrient concentrations. Periodically these algae blooms interfere with activities such as swimming.

GROUND WATER

The two primary wells in the park were drilled to their present depths in 1970. They draw water from the Jordan formation. The well which serves the campground, service court, and manager's residence is 507 ft deep. A second well, located in the picnic ground, is 455 ft deep. There are large amounts of iron and magnesium in park water which affect the water's color, taste, and smell and stain the plumbing fixtures.

Newly acquired life estates within park boundaries typically include abandoned wells. The park currently has four abandoned wells on life estate lands. Use should be made of the wells where appropriate and the remainder should be abandoned following Minnesota Health Department abandonment procedures.

FISHERIES

Fishing is a popular activity in the Waterville area. Sakatah and Tetonka lakes are connected by channels making both lakes accessible to boaters using the boat ramp in the park. Sakatah Lake is generally dominated by rough fish species and bullhead fishing is very popular. Fair populations of crappie, northern pike, and white bass are also present.

Fish kills are frequent in Sakatah Lake (averaging 3 every 5 years). They are the result of a lack of oxygen in the water. This is caused by algae blooms in summer and minimal penetration of sunlight through the ice and snow in the winter. Because of this situation, coupled with a large population of rough fish, minimal management is being done on this lake.

ARCHAEOLOGY/HISTORY

A preliminary archaeological survey of Sakatah Lake State Park was conducted by the University of Minnesota, Department of Anthropology in 1971. Four burial mounds first reported in the late 1800's were still present. A habitation site is believed to exist in the area of the point separating Sakatah Lake from Lower Sakatah Lake. However, no detailed analysis was made of this site.

During early historic times, the area was inhabited by Dakota Indians. These people lived by hunting, gathering, and trapping. In 1826, the trader, Alexander Faribault, established a trading post on the northeast shore of Cannon Lake near present day Faribault. He eventually established at least five trading posts at various points along the Cannon River. One of these may have been on a site that is now part of the park.

The area surrounding the park has an interesting local history which has been documented in the master plan for the Sakatah Singing Hills State Trail and in the Cannon River resource analysis. Copies of these documents are included in the management plan details.

RESOURCE MANAGEMENT OBJECTIVES

To maintain or reestablish plant and animal life which represent pre-European settlement biotic communities.

To utilize resource management techniques that will harmonize with the park's natural systems.

RESOURCE MANAGEMENT

Action	Phase 1	Phase 1	Phase 3	Phase 4	Phase 5	Total	Conditional
Vegetation I Establish and maintain tall grass prairie in key areas.		\$ 3,000 \$	3,000	\$ 3,000	\$ 1,000	\$ 10,000	Ongoing
2 Maintain open grass- land north of the Sakatah Singing Hills Trail.	\$ 2,000			1,000	·	3,000	Ongoing
3 Remove understory trees, thin canopy, and establish grass in the lakeside picnic ground.	2,000		2,000			4,000	
4 Establish grass in campground.	1,000		500		500	2,000	Ongoing
5 Increase water level in shallow marsh southwest of Schwartz Hill when life estate becomes available.		Conditiona	1				
6 Plant old field grasslands and life estate lands with oak.		Conditiona	l (will	be ongoin	g)		
7 Plant mixed oak along edges of life estate agricultural fields as they become available for park use		Conditiona	1				
8 Maintain mature maple basswood canopy.		No develop	ment cos	st ·			
9 Diversify species content of ash plantin north of service court			500				500

Action	Phase 1	Phase 2	Phase 3	Phase 4	Phase 5	Total	Conditional
10 Control weed infested areas.		Cost cov	ered by pa	ark maint	enance		
11 Develop fire manage- ment plan and conduct prescribed burns.	\$ 1,000	\$ 1,000	\$ 2,000	\$ 2,000	\$ 2,000	\$ 8,000	Ongoing
12 Identify tree diseases throughout the park and monitor their progression. 13 Maintain maximum number of snags.	1,000	1,000		1,000	1,000	5,000 500	
14 Inventory and map DNR, Natural Heritage Elements.		No devel	opment cos	st			
Wildlife 1 Maintain large, undisturbed forest areas.		No devel	opment cos	st			
2 Inventory shorebird nesting habitat on island in Sakatah Lake.		No devel	opment cos	st			
3 Develop deer manage- ment program.		No devel	opment cos	st			
Groundwater 1 Test well water and improve quality.		DNR, Bur	eau of Eng	gineering	& Divisio	on of Wat	ers
Archaeology/History 1 Conduct archaeo- logical survey.	5,000					5,000	
2 Consult with Inter- tribal Indian Affairs Board and state archaeologist prior to management near archaeological sites.		No cost					
3 Conduct historical research to locate site of Alexander Faribault's trading po	ost.		2,500			2,500	

	Phase	Phase	Phase	Phase	Phase		
Action	1	2	3	4	5	Tota1	Conditional
	فعظته فبسائله عليه وأنسسه وبياسته معتمر	_	The state of the s				

4 Make information on prehistoric/historic sites available to park interpretive staff.

No development cost

Physical Development and Recreation Management

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EXISTING DEVELOPMENT

Campground
60 campsites
modern toilet building (flush toilets and showers)
trailer dump station

Primitive Group Camp pit toilet hand pump

Picnic Grounds modern toilet building (vault) picnic tables 60 car parking lot

Swimming Beach changing stalls 2 pit toilets sand beach

Boat Launch
metal grate launch ramp
gravel surfaced parking lot

Administrative/Support Facilities contact station/park office manager's residence shop building

Interpretive Center interpretive building seasonal residence outdoor amphitheater 2 pit toilets

Trails
5 miles hiking
2 miles ski touring
1/2 mile snowmobiling
Sakatah Singing Hills State Trail passes through park.

RECREATION MANAGEMENT OBJECTIVES

To coordinate park development and management with private and other public facilities and resources in the vicinity

To provide park development which is necessary for efficient management and for the public to experience, study, and enjoy the natural resources

To locate park development where it will have the least impact on sensitive natural or historic resources, will not detract from the enjoyment of other users, and will allow easy access to areas of high scenic or study value

To ensure physical accessibility and program usability of new developments by special populations (i.e., persons with physical disabilities, the elderly, and the very young)

PROPOSED DEVELOPMENT	Phase	Phase	Phase	Phase	Phase		
Action		2	3	4	5	Total	Conditional
Camping 1 Upgrade poorly designed campsites.	\$ 8,000)				\$ 8,000	
2 Pave campground roads with asphalt.		See Road	ls & Park	ing, Actio	on #2		
3 Manage vegetation in campground.		See Vege	tation M	anagement,	Action	#4	
4 Relocate primitive group camp.	3,500)				3,500	
5 Develop horseback riders campground.		Conditio	nal			9,000	
6 Monitor use of camping facilities I state trail users a provide camping area if use justific	nd	Conditio	nal		·		
Picnic Grounds 1 Develop second picnic area.	5,000		\$ 20,000	0		25,000	
Roads and Parking T Make improvements to park entrance road.	0	\$ 20,000				20,000	
2 Pave major park road and parking lots wind asphalt.				\$ 90,000	\$ 90,00	0	
3 Develop access road through park to proposed primitive grown and horseback rider campground.	- up			5,000)	5,000	
4 Upgrade picnic ground parking lot.	5,000) .				5,000	
5 Upgrade boat launch parking lot.			5,000	0		5,000	·
6 Request 30 mph speed limit on township road which connects TH 60 and Cty Rd 99 east of pa		No cost					

Action	Phase 1	Phase 2	Phase 3	Phase 4	Phase 5	Total	Conditional
Trails TEXPand the park hiking/ski touring trail system.	\$ 5,000		\$ 4,000			\$ 9,000)
2 Consider an alternative horseback trail alignment through southern portion of park, rather than alostate trail.	ng	Conditio	onal		. **		
<pre>3 Provide snowmobile access from park entrance to state trail.</pre>		No devel	opment cos	st			
4 Reroute hiking-only portion of Lakeside Trail to avoid eroded areas.		Included	i in Trails	s, Action	n #1		
5 Provide bike lockup facility in picnic area near parking lots.	500					500	
6 If state trail is developed for horses, provide tie-up area near day use facilities.		No devel	opment co	st			
7 Consider bike concession in park.		No devel	lopment co	st		·	
8 Consider development of hostel in park.		No devel	lopment co	st			
Interpretive Services 1 Eliminate existing visitor center and construct multi-purpo visitor center/ winter trail shelter.				\$ 35,000		35,000)
2 Include state trail and canoe route infor mation on park handou			To be co	vered in	park ope	rations	
3 Develop two inter- pretive brochures.		\$ 2,000)				\$ 2,000
4 Install interpretive signs at prehistoric and historic sites.			1,000			1,000)

Act	tion	Phase 1	Phase 2	Phase 3	Phase 4	Phase 5	Total	Conditional
5	Recommend development of interpretive brochure for state trail and canoe and boating route.		To be f	unded by D	NR Trails	& Waterv	ways Unit	
6	Provide park information and interpretation in picnic area.	\$ 1,000					\$ 1,000	
	ter Activities Maintain beach as it is.		No deve	lopment co	st			٠.
2	Upgrade boat launch ramp.			\$ 5,000	I		5,000	I
	ninistrative/Support F Construct contact station/park office.	<u>acilities</u>		70,000	ı		70,000	1
2	Construct unheated storage building in service court.			55,000	ı		55,000	·
3	Construct 2-car garage for manager's residence.		Conditi	onal (esti	mated cos	t)	13,000	\$13,000
4	Maintain seasonal residence adjacent to visitor center for present.		No deve	lopment co	est			
5	Construct fireproof building for storage of flammable substance	es.	\$ 8,00	0			8,000	ı
6	Bury two gasoline tanks.		Covered	in park o	perations			
7	Bury overhead power lines.		3,00	0			3,000	

Park
Boundary

BOUNDARY MODIFICATION

The statutory boundary includes 842 acres in Sections 24, 25, and 26, T109N, R23W and Sections 19, 20, and 30, T109N, R22W. Statutory boundaries are established by the legislature. The DNR, Division of Parks and Recreation can purchase land or easements only within a park statutory boundary. A statutory boundary does not affect the status of land within it, it simply permits the DNR to talk to an individual landowner and negotiate for the purchase of that portion of land in which the DNR is interested.

Within the statutory boundary of Sakatah Lake State Park there are two parcels of private land totaling 80 acres. All other land is owned by the state. This includes three parcels of land totaling 108 acres which are held in life estate (land owned by the state, but the sellers retain the right to use the property, with certain restrictions, for the rest of their lives).

The two parcels of privately owned land are adjacent to and east of the township road which runs through the park. One piece is 52 acres of agricultural land and the other is 28 acres of wooded land. The DNR is interested in acquiring all lands within the statutory boundary, but only with the full consent of the landowners involved and only when money is available and the outlay of funds can be justified. Until this time the land will remain privately owned acreage within the park boundary.

In addition, the small 6 acre island in the southwest quarter of Section 119, Township 109 North, Range 22 West near the east end of Sakatah Lake is proposed for inclusion in the statutory boundary. The island has potential value as a wildlife resource, primarily for bird life. The island can also provide good wildlife observation for visitors canoeing or boating on the east end of the lake.

Maps

